CLAIMS

1. An image sensor with matrix readout including a matrix of elementary photodetectors (P) connected through at least a bus (Bpel) to a remote integrator (I) converting the signal of each elementary photodetector into a voltage, characterized in that it includes, between the end of the bus and the input of the integrator, an impedance matching device (D) delivering at its output, during the time required for converting a photodetector signal, a variation of charge which corresponds to an affine function of the charge present at the input of said matching device, wherein this variation of charge is determined by:

$$\int_{t=0}^{t=Tconv} Iinj(t).dt = \int_{t=0}^{t=Tconv} I\,\mathrm{int}(t).dt$$

wherein Iinj is the instantaneous current of the bus, injected at the input of the impedance matching device, Iint is the instantaneous current at the input of the integrator and Tconv is the conversion time.

2. The image sensor according to claim 1, characterized in that the impedance matching device (V) has a low output capacitance.

3. The image sensor according to any of claims 1 or 2, characterized in that the impedance matching device is connected as close as possible to the input of the integrator.

4. The image sensor according to any of claims 1 to 3, characterized in that the impedance matching device includes a common-gate TMOS transistor (T)

mounted on the input of the integrator.

5. The image sensor according to any of claims 1 to 4, characterized in that the impedance matching device includes a common-gate TMOS transistor (T) associated with a feedback amplifier (G).

6. The image sensor according to claim 1, characterized in that the impedance matching device includes two transistors (T1, T2) and two voltage sources (V1, V2) mounted as a current mirror.